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## Construction of a 7-aminocephalosporanic acid (7ACA) biosynthetic operon and direct production of 7ACA in *Acremonium chrysogenum*.

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We have used cDNA encoding D-amino acid oxidase, and genomic DNA encoding cephalosporin acylase from *Fusarium solani* and *Pseudomonas diminuta*, respectively, to construct a novel hybrid 7-aminocephalosporanic acid (7ACA) biosynthetic operon under the control of regulatory elements from the alkaline protease gene of *Acremonium chrysogenum*. Transformants of *A. chrysogenum* BC2116, a high cephalosporin-producing strain, containing this operon, synthesized and secreted low levels of 7ACA. Although the amounts are not yet commercially significant, this represents the first microbial production of 7ACA and demonstrates the feasibility of introducing new biosynthetic capabilities into industrial microorganisms by combining fungal and bacterial genes.

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